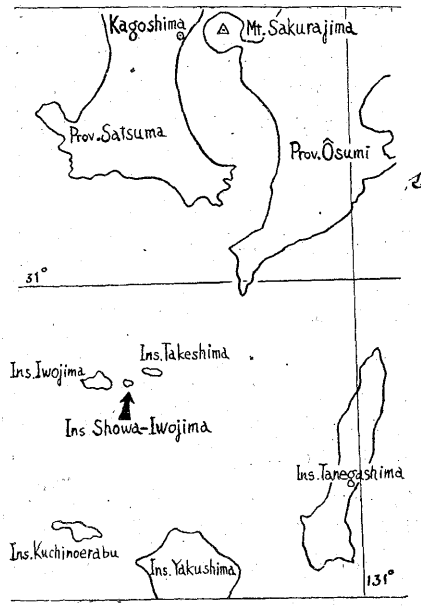
Toshio SHIN*: Present Bryophyte flora of the Ins. Showa-Iwojima erupted from the sea-bed seventeen years ago

新 敏夫*: 海底噴火後 17 年目の昭和硫黄島の蘚苔類

1. Preface For seventeen years since the eruption of the Ins. Showa-Iwojima no scientific paper concering the island was published except Dr. T. Matsumoto's geological report. As no botanist had explored the island, the writer carried out the botanical survey of the island on July 26, 1951, and the results obtained are as following.

3. Topography and geology The Ins. Showa-Iwojima is an island raised above the sea-level by an sea-bed eruption occured in December of 1934. It lies two km to the east of the Ins. Iwojima and four km to the west of the Ins. Takesima of Kagoshima Prefecture.

The basal part of the island is of augite-andesite, and the surface is of massive porous lava rocks and of strata of pumice. Near the centre of the island a small crater-like basin is found which is 100 m across and ten m in depth.



According to Dr. Matsumoto, in July of 1953 the island was 470 m from east to west, and 170 m from south to north, with the heighest point of 29.04 m above the sea, and in October of 1950 the extent of the island decreased to 420 m by 120 m and lowered to 28.05 m. Though such a phenomenon like this is commonly found among the oceanic island, in the case of this island it is doubtful whether the change of features was caused by sea-erosion or by submergence.

In the south beach of the island

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at a spot about three m above the sea-level and five m from the shore-line a hot spring is soughing up to the height of one m from a lava-crack, the temperature of which being around 60°C. Thermal algae such as two species of Cyanophyceae and four species and two varieties of diatoms were seen growing abundantly in tne rock-basin into which the hotspring water flew. Nearby in the sea at several places hotsprings were coming up.

3. Vegetation Being covered with lava layer all over, the island is very dry, so that it does not afford the growth of vegetation, and the island remains quite barren except some patches of broken granular pumice accumulated at the cracks of lava rocks covered occaisionally by *Miscanthus condensatus* and *Eurya japonica* var. *montana*.

In the crator-like basin mentioned above, in the cracks of lava rocks, granular pumice is accumulated there were found three species of Spermatophyte and four species of Pteridophyte. In the shades of these plants and under the bridging and folding lava layers in this basin where the sunlight is very weak, Bryophytes in the following list were found. : (+abundant, – scarce, – – very scarce)

Hepatics :——*Pellia Fabbroniana* Raddi (– –), *Cephalozia otaruensis* Stephani (–), *Jungermannia lanceolata* L. (–).

Mosses :——*Philonotis sosia* Mitten (–), *Webera nutans* (Schreb.) Hedw. (+), *Leucobryum scabrum* Lac. (– –), *Trematodon drepanellus* Besch. (+), *Campylopodium euphorocladum* (C. Mull.) Besch. (–), *Isopterygium textiri* (Lac.) Mitt. (–), *Philonotis* (2 spp.) (–), *Sematophyllum* (1 sp.) (–).

Among twelve species listed above, only two species belonging *Sematophyllum* and *Trematodon* bore complete capsules. As the author could not get to the deeper place in the lava-cracks with his pickel, it is not at all sure if there grew more others.

It seems marvelous that some of the species listed above which normally grow in rather moist places can grow in such dry places. They are understood being allowed to grow in so scanty sunlight.

The discovery of *Campylopodium euphorocladum*, the southern element, was very interesting which had never been found in Japan proper except on Mt. Sakurajima of Kagoshima Prefecture. The specimens with capsules belonging the same species were collected abundantly on the Ins. Iwojima by the auther. All the bryophytes in the list were found too on the Ins.

Iwojima. Around the island the west wind blows through all the year, and the spores may have been blown to this island from the Ins. Iwojima.

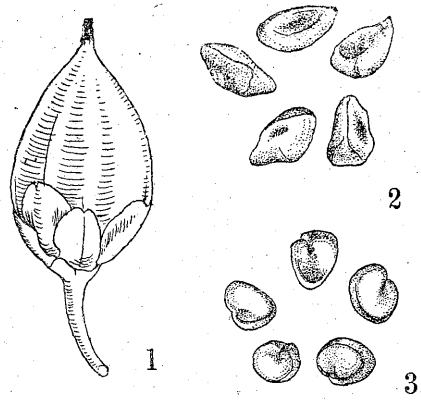
There is a question how the spores of *Leucobryum scabrum* reached the island which produces the capsule very rarely.

Literature: Tadaiti Matsumoto: Report of Japan Science Society **11**: 4 (1936), 14: 4 (1939); Idem: "Volcano" published by Japan Volcano Institute **3**: 2 (1937); Idem: Jap. Jour. Geol. Geogr. **9**: spec. no. (1943).

○ケンロクヒサカキ (正宗厳敬・里見信生) Genkei MASAMUNE & Nobuo SATOMI: A new variety of *Eurya japonica* Thunb.

ヒサカキの果実は通常先端が円頭であるが，石川県石川郡内川村の丘陵にあるヒサカキはその果実の先端が図の如く尖つていて通常のものと異つている。そして，その種子も亦ヒサカキの種子より長い。

日本三公園の一つとして知られている金沢市の兼六公園内にはヒサカキが植栽材料として沢山使われているが，これ等の中に上述の尖つた果実をつける株が一本ある。兼六公園は文政二年に時の加賀藩主前田齊広侯が造築したもの言われているが，現在の面積の公園が一度に出来たのでなく，史実にも明な如く，先ず瓢池(ヒサゴ)周辺が経営されたと伝えられ，〔小川穉孜: 兼六公園誌 (明治 27 年, 1894)〕ヒサカキは特にこの辺に多い。これは恐らく作庭材料として，手近に近郊の山々から得られた為と想像するが，この尖つた果実を有する株も造園に当つた人々が現地で変りものである事を知り他の多くの株と共に移植したものであろう。(金沢大学，理学部，植物分類学研究室)



1. A fruit. (4×).
2. Seeds of new variety. (6×).
3. Seeds of *Eurya japonica* (6×).

Eurya japonica Thunb. var. **ovata** Masamune et Satomi var. n.

Bacca ovata apice acuminata, ca. 7 mm longa 5 mm lata. Semina longiora quam typica.

Nom. Jap. *Kenroku-hisakaki* (Kenroku means of Kenroku-park which is one of the most famous public park in Japan).

Hab. Honsyu: Utikawa-Mura. Isikawa-gun, Kaga. (N. Satomi, Nov. 9, 1952—Typus in Herb. Kanazawa Univ. no. 13921.); Kenroku-park, Kanazawa (N. Satomi, Nov. 11, 1952; no. 13922—cultivated).